

Original Article**Factors Related To Anxiety Level Of Public Health Employees During COVID-19**

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ABSTRACT

Background: Coronavirus is a virus from Wuhan. The impact of the Covid-19 pandemic has caused physical and mental health problems, and this situation is also experienced by all health workers, such as doctors, nurses, midwives, and other health professionals. This study aimed to determine the factors related to the level of anxiety of Puskesmas employees during Covid-19.

Methods: The design of this study used a cross-sectional. This research was conducted at the Kemantan Public Health Center, Kerinci Regency. The population of all Kemantan Health Center employees, the number of samples as many as 62 Puskesmas employees. The independent variables of this study were age, gender, education level, economic status, and social support. The dependent variable of this study is the level of anxiety—data analysis using Chi-Square.

Results: The results showed that the proportion of the Public Health Center employees who are anxious is higher on inadequate social support (70%) than good social support (34.4%). The bivariate analysis found that poor social support had a risk of 0.634 times for experiencing anxiety, and it was proven that the significant p-value was <0.05 (PR 2.036: 95% CI 1.195-3.470). There is no relationship between age and anxiety levels, and there is no relationship between gender and anxiety levels, there is no relationship between education level and anxiety levels, there is a relationship between economic status and anxiety levels, and there is a relationship between social support and anxiety levels.

Conclusion: It was concluded that the variables that had a relationship with the anxiety factors of Public Health Center employees during Covid-19 were economic status and social support. Furthermore, there is no relationship between gender and education level with the anxiety level of the Public Health Center employees at the Kerinci Regency Kerinci Health Center

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Introduction

Coronavirus, or so-called Covid-19, is a virus that became a pandemic in 2019, originating from Wuhan. The coronavirus is a family of Coronaviridae. Coronavirus is zoonotic, likely of animal origin, and transmitted to humans. Covid-19 is not yet known with certainty about the transmission process from animals to humans, but phylogenetic data allows Covid-19 to be zoonotic. The development of subsequent data shows human-to-human transmission, which is predicted through droplets and contact with viruses released in droplets. This is following the incidence of transmission to health workers who treat Covid-19 patients.

According to the World Health Organization (WHO), virus-induced diseases continue to emerge and become a severe problem for public health. In the past 20 years, viral epidemics such as Severe Acute Respiratory Syndrome coronavirus (SARS-CoV) in 2002-2003 and influenza H1N1 in 2009. The Middle East Respiratory Syndrome coronavirus (MERS-CoV) was first infected in Saudi Arabia in 2012 (WHO, 2021a, 2021b). The latest case of an epidemic of respiratory infections occurred in Wuhan, the largest metropolitan area in China's Hubei Province, that was first reported to the WHO on December 31, 2019. Positive cases of Covid-19 in Indonesia until July 2, 2021, amounted to 2.26 million cases, cases recovered amounted to 1.92 million,

and the death toll amounted to 20,027. Covid-19 data in Jambi Province until July 2, 2021, was confirmed to be 13,145 people affected by Covid-19, the number of recovered cases amounted to 11,392 people, and the dead numbered 270. Covid-19 data in Kerinci Regency until July 2, 2021, was confirmed at 326 cases, cases that recovered 308 people and who died amounted to 10 people (Kemenkes, 2020; Susilo et al., 2020).

The impact of the Covid-19 pandemic caused many losses, such as physical health problems, economic disparities, social disparities, and mental disorders. Mental disorders that occur during the Covid-19 pandemic are anxiety, fear, stress, depression, panic, sadness, frustration, anger, and denial. This situation is felt by the community and experienced by all health workers, such as doctors, nurses, midwives, and other health professionals (Asriyani & Sriningsih, 2021; Suwardianto & Vitaria, 2020; Wulandari & Hidayat, 2020). The research results by FIK-UI and GPA (2020) show that the most common response in health workers is a feeling of anxiety and tension, as much as 70%. High anxiety in health workers can have a negative impact, according to Fehr & Perlman (2015), weakening social relations, stigma against health workers, the onset of anger and hostility towards the government and health workers, and drug abuse (Ose, 2020; Ramaci et al., 2020; Villa et al., 2020).

Based on data at the Kemantan Health Center of Kerinci Regency Warm Water District, the number of employees in the Kemantan Health Center is 62 people, among others; a general practitioner one person, a dentist one person, public health worker one person, nurse 18 people, nurse / News 9 people, Nutrition / AKZI personnel two people, Pharmacist 1 person, Midwife 16 people, health analyst two people, dental nurse one person, pharmaceutical personnel two people, rivet three people, administrative personnel two people and other personnel three people. Based on the initial survey of 3 employees who worked at the Kemantan Health Center, they said they felt anxious about the situation in the Covid-19 pandemic but remained vigilant about its transmission. Anxiety levels increased due to 1 case that tested positive for covid-19 and lived in the vicinity of the Public Health Center. Based on identifying the conditions in the Public Health Center Kemantan, Kerinci regency, the author is interested in studying more about "Factors related to the anxiety level of Puskesmas employees during Covid-19 at the Public Health Center Kemantan, Kerinci Regency".

Method

This research uses quantitative methods with a cross-sectional design. The research time was conducted from March-April 2021. The population is all employees who work in the Kemantan Health Center, which amounts to 62 people. The sample in this study used a total

sampling of 62 Public Health Center employees ([Nursalam, 2015](#); [Sugiyono, 2009](#)). The instrument uses a questionnaire. The independent variable is a factor related to the level of anxiety, while the dependent variable in this study is anxiety. Testing using statistic test. Research has conducted an ethical test

Results

Table 1. Distribution of Respondents Based on Anxiety Factors at the Kerinci Regency Health Center

No	Factors	Frequency (f)	Percentage (%)
1	Age		
	17-25	15	24,2
	26-45	40	64,5
	>46	7	11,3
2	Gender		
	Male	19	30,6
	Female	43	69,4
3	Education Level		
	Senior High School	4	6,5
	Associate Degree	32	51,6
	Bachelor Degree	24	38,7
	Master Degree	1	1,6
	Ph.D	1	1,6
4	Economic Status		
	Low	18	29
	Tall	44	71
5	Social Support		
	Bad	30	48,4
	Good	32	51,6
6	Anxiety Level		
	No anxiety	28	45,2
	Mild anxiety	28	45,2
	Moderate anxiety	6	9,7

Based on the distribution table of anxiety factors in the table above, it shows that the characteristics of study respondents based on age are mostly 26-45 years old, as many as 40 respondents (64.5%), by gender most of them are women as many as 43 respondents (69.4%), based on education level is mostly DIII as many as 32 respondents (51.6%), based on economic status most of them are high economic status as many as 44 respondents (71%), as for the level of anxiety in respondents who had no anxiety as many as 28 respondents (45.2%), mild anxiety 28 respondents (45.2) and moderate anxiety as many as six respondents (9.7%).



Table 2 Relationship Between Age and Anxiety Levels

Age	Anxiety								
	Anxiety		not Anxiety		Total		PR	CI (95%)	P-Value
	n	%	n	%					
Young	29	52,7	26	47,3	55	100			
old	3	42,9	4	57,1	7	100	1,230	0,505-3,000	0,703
Total	32	51,6	30	48,8	62	100			

Table 2 above shows that the proportion of the Public Health Center employees who are anxious is higher at a young age (52.7%) than the old age (42.9%). The bivariate analysis found that young age had a risk of 1,230 times experience anxiety and was not proven to be significantly p-value > 0.05 (PR 1,230: 95% CI 0,505-3,000).

Table 3 Relationship Between Gender and Anxiety Levels

gender	Anxiety								
	anxious		not anxious		Total		PR	CI (95%)	P-Value
	n	%	N	%					
Male	7	36,8	12	63,2	19	100			
Female	25	58,1	18	41,9	43	100	0,634	0,334-1,203	0,170
Total	32	51,6	30	48,8	62	100			

Table 3 above shows that anxiety among the Public Health Center employees is higher in women (58.1%) than in old age (36.8%). The bivariate analysis found that the female sex had a 0.634 times risk of experiencing anxiety, and it was not proven to be significantly p-value > 0.05 (PR 0.634: 95% CI 0.334-1.203).

Table 4 Relationship Between Education Level and Anxiety Level

Education Level	Anxiety								
	anxious		not anxious		Total		PR	CI (95%)	P-Value
	n	%	n	%					
low	3	75,0	1	25,0	3	100			
high	29	50,0	29	50,0	59	100	1,500	0,806-2,793	0,613
Total	32	51,6	30	48,8	62	100			

Table 4 above shows that anxiety among the Public Health Center employees is higher at the higher education level (50%) than at the low education level (75%). The bivariate analysis found that the higher education level had a risk of 1,500



times for experiencing anxiety, and it was not proven to be significantly p-value > 0.05 (PR 1,500: 95% CI 0.806-2.793).

Table 5 Relationship Between Economic Status and Anxiety Level

Economic Status	Anxiety						PR	CI (95%)	P-Value			
	anxious		not anxious		Total							
	N	%	n	%								
low	14	77,8	4	22,2	18	100	0,634	0,334-1,203	0,018			
	18	40,9	26	59,1	44	100						
Total	32	51,6	30	48,8	62	100						

Table 5 above shows that the proportion of anxious the Public Health Center employees is higher in high economic status (40.9%) than in low economic status (77.8%). The bivariate analysis found that high economic status had a risk of 0.634 times for experiencing anxiety, and it was proven that the significant p-value was <0.05 (PR 0.634: 95% CI 0.334-1.203).

Table 6 Relationship Between Social Support and Anxiety Level

Social support	Anxiety						PR	CI (95%)	P-Value			
	anxious		not anxious		Total							
	n	%	n	%								
Not Good	21	70,0	9	30,0	30	100	2,036	1,195-3,470	0,011			
	11	34,4	21	65,6	32	100						
Total	32	51,6	30	48,8	62	100						

Table 6 above shows that the proportion of the Public Health Center employees who are anxious is higher for inadequate social support (70%) than for good social support (34.4%). The bivariate analysis found that poor social support had a risk of 0.634 times for experiencing anxiety, and it was proven that the significant p-value was <0.05 (PR 2.036: 95% CI 1.195-3.470).

Discussion

The Relationship between age and anxiety levels of the Public Health Center employees during Covid-19 at the Kerinci District Health Center The results of the univariate analysis of the proportion of respondents aged 17-25 years were 15 respondents (24.2%), aged 26-45 years were 40 respondents (64.5%), age >46 were

seven respondents (11.3%). The bivariate analysis results showed no significant relationship between age and anxiety levels of the Public Health Center employees with (p-value = 0.170) young respondents had 1,230 times the risk of experiencing anxiety compared to older respondents (95% CI 0.505-3,000). The proportion of respondents who experienced anxiety at a young age was 29 respondents



(52.7%), and the proportion of respondents at old age was three respondents (42.9%). According to the Indonesian Ministry of Health, in 2009, age was categorized into 2, namely young age (adolescents 17-25 years and adults 26-45 years) and old (elderly >46 years). According to Kaplan and Sadock (2010), anxiety can occur at any age, more often in adulthood and more common in women. Most anxiety occurs at the age of 21-45 years⁷. This study is in line with Irawati et al. (2021) research, which showed no relationship between age and anxiety. According to Suwaryo and Yuwono (2017), someone aged 26-35 is of productive age and has an excellent cognitive ability to receive information. Meanwhile, someone at the age of 25 years or a young age is mentally lonely, and his soul is not yet mature, so it is easy to experience anxiety^{5,8}. Based on the study results, the researchers argue that any age category can experience anxiety, fear, or worry because the cause of anxiety disorders is thought to be caused by a combination of genetics and environment.

The relationship between gender and the level of anxiety of the Public Health Center employees during Covid-19 at the Kerinci District Health Center. The results of the univariate analysis of the proportion of male respondents were 19 respondents (30.6%), and 43 respondents (69.4%) were female. The results of the bivariate analysis showed that there was no significant relationship between gender and the anxiety level of the Public Health Center employees with (p -value = 0.703) female respondents had a

0.634 times risk of experiencing anxiety compared to male respondents with (a 95% CI 0.334-1.203). The proportion of respondents who experienced anxiety in men was seven respondents (36.8%) and 25 respondents (58.1%). Gender, according to Hungu (2017), is the difference between women and men biologically since a person is born. Gender is a result of sexual dimorphism, which in humans is known as male and female; according to Sunaryo 2015 who wrote in his book that an adult male has a strong mentality toward something that is considered threatening to him compared to women¹¹. This study aligns with Heningsih's research (2019), which found no relationship between gender and anxiety levels¹⁰. Based on the study results, the researchers argue that Covid-19 can attack anyone regardless of gender, and men and women can experience anxiety anytime and anywhere due to worrying or dangerous conditions of this pandemic.

The relationship between education level and anxiety level of the Public Health Center employees during Covid-19 at the Kerinci District Health Center, The results of the univariate analysis of the proportion of respondents at the high school education level, were four respondents (6.5%), DIII were 32 respondents (51.6%), S1/DIV 24 respondents (38.7%), SII was one respondent (1.6 %), and SIII amounted to 1 respondent (1.6%). The results of the bivariate analysis showed that there was no significant relationship between education level and anxiety level of the Public Health Center employees, with (p -value =



0.613) respondents having a high level of education had a 1,500 times risk of experiencing anxiety compared to respondents who had a low level of education (95% CI 0.806-2,793). The proportion of respondents who experience anxiety at the low level of education is three respondents (75%), and at the higher education level, as many as 29 respondents (50%). Most of the anxiety was experienced in higher education because most respondents had a higher education than low education. According to Law Number 20 of 2003 concerning the National Education System in article 14 chapter VI, the education level consists of primary education (SD, MI, SMP, and MTs), secondary education (SMA, MA, SMK, and MAK), and higher education (diploma, bachelor, master, and doctorate).

The results showed no significant relationship between education level and anxiety because the level of a person's educational status could not affect perceptions that could cause anxiety. Research conducted by [Zamriati W et al. \(2019\)](#) also stated no relationship between education level and anxiety level¹². Based on the study results, the researchers argue that the level of education does not affect anxiety. High or low education does not rule out the possibility of someone adding knowledge or information about Covid-19 to control anxiety during the pandemic ([Fu et al., 2020](#); [Wulandari & Hidayat, 2020](#)).

The Relationship between economic status and the level of anxiety of the Public Health Center employees during Covid-19 at the Kerinci District Health Center The

results of the univariate analysis of the proportion of respondents in low economic status were 18 respondents (29%) and 44 respondents (71%). The results of the bivariate analysis showed that there was a significant relationship between economic status and anxiety levels of Public Health Center employees with (p-value = 0.018) respondents who had high economic status had a 1.901 times risk of experiencing anxiety compared to respondents who had low economic status (95% CI 1.234-2,930). The proportion of respondents who experience anxiety in low economic status is 14 respondents (77.8%) and 18 respondents (40.9%). According to [Soerjono Soekanto \(2019\)](#), socio-economic conditions are a position, position, title, ownership owned by an individual or group related to the level of education, income level, ownership of household assets, and the fulfillment of family and work needs that will significantly affect the quality of life ([Savitsky et al., 2020](#)). affect the social status of a person, group, or family in the community. Based on the Kerinci District UMP in 2019, the economic status grouping consists of 2, namely low economic status (Rp 2,423,000) and high economic status (> Rp 2,423,000)⁶. Research conducted by Maryam and Kurniawan A (2019) explains that income used to indicate economic status influences anxiety levels. The study results show that the prevalence of income below the minimum wage has more anxiety than respondents with income above the minimum wage 5 ([Riskeidas, 2018](#)). Based on the results of the study, the researcher argues that high



economic status can cause anxiety due to available positions at the Puskesmas, which carry out more examinations and treatment of patients so that they interact more with patients, which causes anxiety about exposure to Covid-19 ([Setiawan & Suwardianto, 2021](#)).

The relationship between social support and the anxiety level of the Public Health Center employees during Covid-19 at the Kemantan Public Health Center, Kerinci Regency. The results of the univariate analysis of the proportion of respondents with poor social support were 30 respondents (48.8%) and 32 respondents (51.6%). The results of the bivariate analysis showed that there was a significant relationship between social support and anxiety levels of the Public Health Center employees with (p -value = 0.011) respondents who experienced poor social support had a 2,036 times risk of experiencing anxiety compared to respondents who experienced good social support (95% CI 1.195). - 3.470). The respondents who experienced anxiety about poor social support were 21 respondents (70%) and 11 respondents (34.4%). According to Cohen & Mckay 1984 (in Luo Lu, 2010), social support has been believed to be a very beneficial reciprocal relationship and keeps individuals from feeling anxious and social support can help individuals reduce the anxiety they feel ([Sihombing, 2021](#); [Simonetti et al., 2021](#)). The social support received by the individual makes him feel that he is being cared for because of the help and assistance he gets, so according to Gurung, social support refers to a sense of being cared for, loved,

respected, and appreciated by the people around him. This study is in line with the research of [Kilinc and Sis Celik \(2020\)](#), community social support is an essential factor in the mental resilience of nurses. Various kinds of public perceptions related to this pandemic, these perceptions affect their support for health workers^{14,15}. The researcher argues that social support must be carried out by fellow Puskesmas employees or the surrounding environment based on the study results. Social support is not only about assisting. Moreover, the other most crucial thing is the perception of someone who receives the assistance.

Conclusion

There is a relationship between age, economic status, and social support with the anxiety level of the Public Health Center employees at the Kerinci Regency Kerinci Health Center. Furthermore, there is no relationship between gender and education level in the anxiety level of the Public Health Center employees at the Kerinci Regency Kerinci Health Center.

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